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| 09/113,491      | 07/10/1998  | ROSS W. CALLON       | IBN-0002            | 8100             |

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| EXAMINER |
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NGUYEN, TOAN D

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| ART UNIT | PAPER NUMBER |
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2665

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/113,491

Applicant(s)

CALLON ET AL.

Examiner

Toan D Nguyen

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-22, 24-34 and 36-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-14, 20-22, 24-33 and 36-38 is/are rejected.
- 7) ☒ Claim(s) 15-19 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. The indicated allowability of claims 3, 20-21 and 28 are withdrawn in view of the newly discovered reference(s) to Dravida et al. (US 5,253,248) and Dommety et al. (US 6,151,319). Rejections based on the newly cited reference(s) follow.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 2, 4-14, 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo et al. (US 5,764,624) in view of Chen (US 6,765,908).

For claim 2, Endo et al. disclose ATM switching system and path changing method, comprising:

for at least one of the nodes (figure 21, reference 101, col. 3 line 66 to col. 4 line 2), generating and storing an alternate output route out of the node such that (figure 1, reference 25, col. 4 lines 51-55), in the event that data packets to be transferred toward a destination node (figure 9A, reference R1) cannot be forward to the next successive node (figure 9A, reference N2) over the link associated with the destination node (figure 9A, reference R1), the at least one of the nodes (figure 9A, references N4 and N5) can forward the data packets over the alternate output route toward the destination node (col. 7 lines 44-52); and

after generating and storing the alternate output route (figure 1, reference 25, col. 4 lines 51-55 and col. 7 line 44), if data packet to be transferred toward a destination node (figure 9A, reference R1) cannot be forward to the next successive node (figure 9A, reference N2) over the link associated with the destination node (reference R1), forwarding the data packets over the alternate output route toward the destination node (figure 9A, reference R1) (col. 7 lines 44-52).

However, Endo et al. do not disclose by embedding the data in virtual packets addressed for the alternate route. In an analogous art, Chen discloses by embedding the data in virtual packets addressed for the alternate route (col. 6 lines 65-66).

One skilled in the art would have recognized by embedding the data in virtual packets addressed for the alternate route to use the teachings of Chen in the system of Endo et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the by embedding the data in virtual packets addressed for the alternate route as taught by Chen in Endo et al.'s system with the motivation being to provide a virtual circuit identifier identifying the virtual circuit in the virtual circuit packet, and transmit the virtual circuit packet over the communication link connected thereto to the intermediate switching node that forms part of the path defining the virtual circuit (col. 6 line 66 to col. 7 line 4).

For claim 4, Endo et al. disclose wherein the alternated output route defines an association between the next successive node and an alternate link out of the at least one of the nodes such that data packets intended to be forwarded to the next successive node can be forwarded over the alternate link (figure 9A, col. 7 lines 44-52).

For claim 5, Endo et al. disclose the output alternate output route is a connection-oriented route (col. 9 lines 10-20).

For claim 6, Endo et al. disclose wherein the alternate output route is a bypass path through the at least one node to bypass the next successive node (figure 9A, col. 7 lines 44-52).

For claim 7, Endo et al. disclose wherein the alternate output route is a bypass path through the at least one node to bypass a failed link out of the at least one node (figure 9A, col. 7 lines 44-52).

For claim 8, Endo et al. disclose the output alternate output route is a connection-oriented route (col. 9 lines 10-20).

For claim 9, Endo et al. disclose wherein the alternate output route is a bypass path through the at least one node to bypass the next successive node (figure 9A, col. 7 lines 44-52).

For claim 10, Endo et al. disclose wherein the alternate output route is a bypass path through the at least one node to bypass a failed link out of the at least one node (figure 9A, col. 7 lines 44-52).

For claim 11, Endo et al. disclose wherein data packets are forwarded over the alternate output route toward the destination node before other nodes on the network receive information that data packets cannot be transferred between the at least one of the nodes and the next successive node (figure 9A, col. 7 lines 44-52).

For claim 12, Endo et al. disclose wherein data packets cannot be forward to the next successive node over the link because of a link failure (figure 9A, col. 7 lines 44-52).

For claim 13, Endo et al. disclose wherein data cannot be forwarded to the next successive node over the link because of a node failure (figure 9A, col. 7 lines 44-52).

For claim 14, Endo et al. disclose further comprising, after forwarding the data packets over the alternate output route toward the destination node, providing to other nodes on the network information that data cannot be transferred between the at least one of the nodes and the next successive node (figure 9A-C, col. 7 lines 44-64).

For claim 27, Endo et al. disclose ATM switching system and path changing method, comprising:

means for generating and storing, for at least one of the nodes (figure 21, reference 101, col. 3 line 66 to col. 4 line 2), an alternate output route out of the node such that (figure 1, reference 25, col. 4 lines 51-55), in the event that data packets to be transferred toward a destination node (figure 9A, reference R1) cannot be forward to the next successive node (figure 9A, reference N2) over the link associated with the destination node (figure 9A, reference R1), the at least one of the nodes (figure 9A, references N4 and N5) can forward the data packets over the alternate output route toward the destination node (col. 7 lines 44-52); and

means for forwarding the data packets over the alternate output route toward the destination node (figure 9A, reference R1)(col. 7 lines 44-52) after generating and storing the alternate output route (figure 1, reference 25, col. 4 lines 51-55 and col. 7

line 44), if data packets to be transferred toward a destination node (figure 9A, reference R1) cannot be forward to the next successive node (figure 9A, reference N2) over the link associated with the destination node (reference RI).

However, Endo et al. do not disclose characterized in that data packets to be transferred are embedded in virtual packets addressed for the alternate route, and then sent. In an analogous art, Chen discloses characterized in that data packets to be transferred are embedded in virtual packets addressed for the alternate route, and then sent (col. 6 lines 65-66 and col. 7 lines 1-4).

One skilled in the art would have recognized characterized in that data packets to be transferred are embedded in virtual packets addressed for the alternate route, and then sent to use the teachings of Chen in the system of Endo et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the characterized in that data packets to be transferred are embedded in virtual packets addressed for the alternate route, and then sent as taught by Chen in Endo et al.'s system with the motivation being to provide a virtual circuit identifier identifying the virtual circuit in the virtual circuit packet, and transmit the virtual circuit packet over the communication link connected thereto to the intermediate switching node that forms part of the path defining the virtual circuit (col. 6 line 66 to col. 7 line 4).

For claim 29, the claim is directed to the same subject matter in claim 5. Therefore, it is subjected to the same rejection.

For claim 30, Endo et al. disclose wherein data packets are forwarded over the alternate output route toward the destination node before other nodes on the network

receive information that data packets cannot be transferred between the at least one of the nodes and the next successive node (figure 9A, col. 7 lines 44-52).

For claim 31, Endo et al. disclose wherein data packets cannot be forward to the next successive node over the link because of a link failure (figure 9A, col. 7 lines 44-52).

For claim 32, Endo et al. disclose wherein data cannot be forwarded to the next successive node over the link because of a node failure (figure 9A, col. 7 lines 44-52).

For claim 33, Endo et al. disclose further comprising, means for providing to other nodes on the network after data packets are forwarded over the alternate output route toward the destination node, information that data cannot be transferred between the at least one of the nodes and the next successive node (figure 9A-C, col. 7 lines 44-64).

4. Claims 3 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo et al. (US 5,764,624) in view of Chen (US 6,765,908) further in view of Dravida et al. (US 5,253,248).

For claims 3 and 28, Endo et al. in view of Chen do not disclose wherein the alternate output route is a connectionless route. In an analogous art, Dravida et al. disclose wherein the alternate output route is a connectionless route (col. 3 lines 12-15). Dravida et al. disclose wherein the alternate output route is a connectionless route (col. 3 lines 12-15 as set forth in claim 28).

One skilled in the art would have recognized wherein the alternate output route is a connectionless route to use the teachings of Dravida et al. in the system of Endo et al.



Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the wherein the alternate output route is a connectionless route as taught by Dravida et al. in Endo et al.'s system with the motivation being used an explicit algorithm for constructing alternate paths in such a way that loop-freedom is guaranteed (col. 3 lines 15-17).

5. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo et al. (US 5,764,624) in view of Chen (US 6,765,908) further in view of Dommety et al (US 6,151,319).

For claims 20-22, Endo et al. in view of Chen do not disclose wherein at least one node of the network is capable of operating in both a connectionless environment and a connection-oriented environment. In an analogous art, Dommety et al disclose wherein at least one node of the network is capable of operating in both a connectionless environment and a connection-oriented environment (figure 1, references 105, 110, 115, col. 2 lines 32-34). Dommety et al disclose wherein at least a portion of the network operates in a connectionless configuration (col. 2 lines 30-34 as set forth in claim 21); wherein at least a portion of the network operates in a connection-oriented configuration (as set forth in claim 22)

One skilled in the art would have recognized wherein at least one node of the network is capable of operating in both a connectionless environment and a connection-oriented environment to use the teachings of Dommety et al in the system of Endo et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the wherein at least one node of the network is capable of operating in

both a connectionless environment and a connection-oriented environment as taught by Dommety et al in Endo et al.'s system with the motivation being to provide an ATM switch performs a switching function in the provisioning of the former service and performs a router function in the provisioning of the latter service (col. 2 lines 35-37).

6. Claims 24-25 and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo et al. (US 5,764,624) in view of Chen (US 6,765,908) further in view of Ferstenberg et al. (US 5,873,071).

For claims 24-25, Endo et al. in view of Chen do not disclose the network comprises at least a portion of the Internet. In an analogous art, Ferstenberg et al. disclose the network comprises at least a portion of the Internet (col. 16 line 11). Ferstenberg et al. disclose the network comprises at least a portion of an intranet (col. 16 line 11 as set forth in claim 25).

One skilled in the art would have recognized internet and intranet to use teaching of Ferstenberg et al. in the system of Endo et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the internet and intranet as taught by Ferstenberg et al. in Endo et al.'s system with the motivation being to use a private and public network (col. 16 line 11).

For claim 36, the claim is directed to the same subject matter in claim 24. Therefore, it is subjected to the same rejection.

For claim 37, the claim is directed to the same subject matter in claim 25. Therefore, it is subjected to the same rejection.

7. Claims 26 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo et al. (US 5,764,624) in view of Chen (US 6,765,908) further in view of Gerzberg et al. (US 6,229,810).

For claim 26, Endo et al. in view of Chen do not disclose the network comprises at least a portion of an extranet. In an analogous art, Gerzberg et al. disclose the network comprises at least a portion of an extranet (figure 18, col. 15 lines 38-39).

One skilled in the art would have recognized the extranet to use teaching of Gerzberg et al. in the system of Endo et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time invention, to use the extranet as taught by Gerzberg et al. in Endo et al.'s system with the motivation being to provide the flexibility of point-to-point tunneling protocol allows the implementation to be client initiated or client transparent, but does require LP support (col. 15 lines 42-44).

For claim 38, the claim is directed to the same subject matter in claim 26. Therefore, it is subjected to the same rejection.

#### ***Allowable Subject Matter***

8. Claims 15-19 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

9. Applicant's arguments with respect to claims 2-22, 24-34 and 36-38 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Toan Nguyen*  
Toan Nguyen